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# ISD News and Views

Volume 10 No. 2

Published by the Information Services Division

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## Commentary

It appears the status of newsletters has been resolved, at least for the time being. Consequently we will continue publishing News & Views.

This month's Agency Spotlight contains an excellent article on everything you want to know about the Data Processing Managers Group but were afraid to ask.

## Agency Spotlight

### The Data Processing Managers' Group

Another mutual fund? Some real competition for Michael Jackson? A set of body muscles which work together to perform a function?

Nope; none of the above. The Data Processing Managers' Group, also called the DPMG or the Group, is an organization comprised of the lead data processing person from every state government agency plus several representatives from Department of Administration's Information Services Division.

According to its charter, the purpose of the DPMG is to:

"... provide a forum for agency data processing managers and the Department of Administration. The Group serves to improve the management of the state of Montana's data and information technology resources through discussion of issues, analysis of opportunities, sharing of ideas, and recommendation of improvements."

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The DPMG Chair is selected each year by the Information Services Division Administrator, so duties rotate among the agency DP Managers.

Our meetings are lively. Our discussions are open and reflect the varying professional opinions of the different DP Managers and the agencies they represent.

Current hot topics include: classification and compensation; network standards and support; network connect fees and services; imaging; state databases; sharing state data; state term contracts; disaster recovery; computer maintenance; and others.

It would be difficult to accomplish meaningful business in our monthly meetings given the list of controversial topics. The DPMG, therefore, works its business through subcommittees. Subcommittees are chaired by a DPMG member but include representatives from throughout the data processing community, depending upon the issues and goals of the subcommittee.

We have found the subcommittees to be an excellent way to conduct our business as well as to gather valuable input from a wealth of knowledgeable technical people.

The Group additionally serves as a good vehicle for bringing up problems and learning how other DP Managers might have handled similar problems in their own agencies. We view information sharing as a significant benefit of the meetings.

We have often invited other subject matter experts to our meetings to help us with various issues; for example, Department of Administration's Classification Bureau to discuss the new point factor system, or the regional US Postal Center in Missoula to talk about Zip+4 impact on computer processing.

The DPMG has provided input to the Cabinet-level Data Processing Advisory Council and has appeared before Legislative subcommittees.

Best of all, the DPMG brings together agency representatives who then become a part of the decision making process at the inception of automation-related policy ideas rather than after a new policy has been announced. True, consensus takes a little longer to achieve, but

everyone has the opportunity to influence the process and be heard.

The Data Processing Managers' Group works. If you have further questions concerning the DPMG or if you'd like to attend a meeting, do not hesitate to seek out your agency DP Manager.

-- Kirsten Graham, Department of Labor

## *Mainframe*

### *Laser Printer*

The Central Computer Operations Bureau has recently installed an additional Laser printer. The purpose of this article is to remind our users of the advantages of converting line printer output to the laser printers.

#### **LASER TERMS:**

Image - Whatever is printed on a side of the sheet, whether it is one line or four pages.

Simplex - Printing on one side of a sheet of paper.

Duplex - Printing on both sides of a sheet of paper.

One-up - One page of print on one side of sheet.

Two-up - Two pages of print on one side of sheet.

Four-up - Four pages of print on one side of sheet.

#### **ADVANTAGES OF USING LASER PRINTER:**

- **Decreased print cost**  
An average one part page report consisting of 10,000 lines of print, at 60 lines per page would cost approximately \$6.32 to produce on a line printer. Following

is a breakdown of the cost of the same report using the laser printer services:

- \$5.01 - One-up simplex printing.
- \$4.60 - One-up duplex printing.
- \$2.30 - Two-up duplex printing.
- \$1.16 - Four-up duplex printing.

- **Tremendous space saving capability**

Laser print is output on 8½ by 11 and 8½ by 14 inch paper. Utilizing the duplex and multiple page per sheet facilities of the laser printer can reduce the physical size of reports by a maximum of 88%, thereby reducing report storage requirements. If you use the pre-drilled 3 hole paper you have a neat and easily bound report (or JCL listing).

- **Versatility**

Using the software products associated with Print Services Facility we can customize your print definitions to individual output using variable print orientation, proportional or uniform spacing and extensive font selection. We can customize your printing by giving you various numbers of copies of various sections of your output therefore making distribution easier.

We can eliminate the need for programmers to pre-format the data that prints on special forms.

We can control the duplex feature so that data which must start on a new sheet does not print on the back of the previous sheet.

- **Eliminate the need to purchase some special forms**

With the use of Overlay Generation Language we can create overlays which are stored and retrieved electronically at print time. This eliminates your need to purchase and store some of your special forms. We can reproduce signatures, logos, the state seal, and many other print specialties including Bar code and OCR.

The obvious advantage to you (the users) is that you do not have to order the forms or store them. Whenever changes need to be made (such as phone #, ad-

dress or heads of state), they can be made quickly and without any waste, and it could prevent the dreaded circumstance of printing bad data on your good forms.

- **Print speed and quality**

The 3825 page printer prints at a rate of 58 pages per minute for simplex pages and about half that for duplex pages. We have two 3825 printers available for use. In the event that one of the laser printers is off line for any reason we have backup capability with the other. The print quality is exceptional with the 3825. Even when using the smaller fonts the output is clean and crisp.

- **Ease of conversion**

The break even point between line printer and laser printer is approximately 48 lines per page for one-up simplex print jobs.

The conversion to the laser printer can be as simple as the addition of a DEST parameter in your JCL.

```
//SYSOUT DD SYSOUT=A,DEST=LASER1
```

When no resources are specified the system defaults (landscape, 8.5 lines per inch, 60 lines per page, duplex) are used.

If you wanted to use the default but wanted the output on 3-hole punched paper you code:

```
//SYSOUT DD SYSOUT=(A,WH3),  
//      DEST=LASER1
```

In most cases it will also require the addition of an OUTPUT statement with the names of the FORMDEF and PAGEDEF which determine the format of your output.

```
//OUTDD1 OUTPUT PAGEDEF=XXXXXX,  
//      FORMDEF=XXXXXX,  
//      CHARS=XXXX,FORMS=XXXX,  
//      DEST=LASER1  
//DDNAME DD SYSOUT=A,OUTPUT=*.OUTDD1
```

These resources (FORMDEF, PAGEDEF, OVERLAYS) are created and maintained by the ISD/Methods Section. Standard output definitions have been developed and are available for use.

Mick Plovanic and Jan Lewis of the Methods and Security Section are available for conversion help, report design, or to answer any laser print questions or concerns you may have. Please contact Mick at 444-2571 or Jan at 444-2901 for all your laser printer needs.

## *Microcomputer*

### *Term Contract Status*

#### DELL Term Contract #319-V

When ordering the Dell 450SE machine with the intent of making full utilization of the 32bit EISA bus, the 32 bit workstation controller board should be ordered. Also, Dell has just submitted a new price list and Addendum 4 should be out in August.

#### Digital/Wyle Term Contract #317-V

Digital/Wyle will be coming out with a new line of products in late August or the first of September. The 386 line now in production will be discontinued and a new line of 386 and 486 machines will replace them. Digital/Wyle, has submitted a new **short term** price list. This price list will not be published because of the short time frame for the products and pricing. Addendum 4 will be published after the new product line is announced and pricing is established.

**NOTE 1:** Please include ship to address on all orders, or note that ship to address is the same as the bill to address.

**NOTE 2:** Please call Gary Warren at 444-0515 for the latest Digital and Dell prices.

### *Microcomputer Term Contract Updates*

The rapidly changing prices of microcomputer equipment on term contract make it difficult to publish and distribute a new addendum before new pricing replaces the addendum. Your comments on implementing a better distribution network have been greatly appreciated. Starting

in August the latest Term Contract Prices will be available through a Zip-Mail distribution list. The Zip-Mail distribution will have an attached Lotus 1-2-3 file, version 2.2. You will be able to obtain the latest pricing information within a few hours!!!! This list is for informal price information ONLY!! An official published addendum will usually follow within a few weeks. Also, the official addendum may not list all the products that are listed on the informal Zip-Mail distribution list. Please call Gary at ext. 0515 to place your name on the Zip-Mail Distribution list.

### *Microcomputer Maintenance*

A Request For Proposal (RFP) was issued to vendors on July 22, 1992 for microcomputer and peripheral maintenance. Members of the committee that wrote the RFP worked very hard to include the needs of all agencies, both large and small. The result was a very sensible RFP with a variety of service levels to choose from. It is anticipated that a term contract for microcomputer maintenance will be in place in early November.

### *Attention... DECstation owners*

If you have one of the following DECstations:

DECstations 316sx, 320+, 320sx, 325c, 333c, and 425c

you may be experiencing problems loading certain software (such as Lotus 1-2-3), or not being able to access expanded memory.

To correct this problem, you will need to install a **device** driver called *nonstd.sys* into your *config.sys* file. The *nonstd.sys* device driver is found on the Utilities Diskette supplied with your DECstation. You will need to copy the *nonstd.sys* driver from the Utilities Diskette to your hard drive.

Insert the following command into your *config.sys* file:

device=drive:\path\nonstd.sys

where *drive*: and *path* specify the drive and directory containing the *nonstd.sys* file. For pro-

per operation, this **device** command must precede the **device** command for the memory manager.

The *nonstd.sys* driver removes upper memory conflicts between hard drives and expanded memory managers or application software.

If you are using QEMM Version 5.12 or later, you can use the **nx** parameter on the QEMM **device** command line in your *config.sys* file instead of loading *nonstd.sys*. See your QEMM documentation for more details on the **nx** parameter.

For more information, please see the addendum to your DECstation User Guide; or if you have any questions concerning the *nonstd.sys* driver, please contact Irv Vavruska at 444-2858 or Jerry Kozak at 444-2907, both from End User Computing.

## Techtalk

### Lotus 1-2-3 "Date" Macro

Entering dates in Lotus 1-2-3 has tended to be difficult, and for the most part very time-consuming. With the use of Lotus macro commands, entering a date fields is made much easier. This is especially true if you perform repetitive data entry tasks.

The following date macro can be added to an existing application to simplify date entries. Be sure to position the date macro below and to the right of any data residing in the spreadsheet. Before you can begin using this macro two range names must be created. One, create a range name called "date" and locate it below the \d label as shown below. Two, create a range name "\d" and locate it one cell to the right of the \d label. After the range names are created, position the cursor in the cell you wish the date to appear and press ALT D.

```
\d      /re-  
DATE    {GETLABEL "Enter Date YR,M,D ",DATE}  
        {EDIT}{HOME}@DATE({END}{DATE})-  
        /rfd--
```

NOTE: When entering Lotus / commands for macro execution, they must be preceded with a single quote '. For example the /re~ should be entered as 're~.

For further information regarding the date macro call Jerry Kozak, EUC at 444-2907.

### ISD's Training Center Gets Ready for the New (Fiscal) Year

To meet changing training needs, ISD continues to make changes in its curriculum. We are adding more short, topic-specific classes in WordPerfect and Lotus. We have also added technical support classes for Novell NetWare and Windows. Finally, we are scheduling fewer low-demand classes to reduce the number of classes that we have to cancel because of low enrollment.

As you may know, our introductory WordPerfect and Lotus classes are now generic. They apply to any supported version of the software. We have also added ½- or 1-day generic classes in place of our longer, version-specific, "Advanced" classes. The following are the classes we've added to date:

- WordPerfect Complex Document Functions
- More WordPerfect Complex Document Functions
- WordPerfect Merge and Sort Functions
- Lotus 1-2-3 WYSIWYG Features
- Lotus 1-2-3 Graphics
- Intermediate Lotus 1-2-3
- Lotus Macros

We also offer the following classes to cover specific features of a single version:

- WordPerfect 5.1 Tables
- WordPerfect 5.1 Columns and Math Functions
- WordPerfect 5.1 Graphics
- Advanced Features of WordPerfect 5.0
- Lotus 1-2-3, Release 3.1, 3-Dimensional Spreadsheets

Check the Training Calendar and class descriptions in each issue of News and Views for details on any of these classes.

For other software training, we need to know what the demand is before we schedule a class. Please help us out by letting us know what classes you want to take:

Periodically, check our class list--the 2-page "Training Information" section in every issue of News and Views.

If you see a class you need, that is not on the Training Calendar, call the ISD Help Desk, 444-2973. Ask Sherry Leone to put you on the waiting list for that class.

Once we have four students on a class waiting list, we will schedule the class.

We hope these changes give you the computer training you want. If you have suggestions for new classes, a different approach to scheduling, or any changes you'd like to see, please call End User Computing at 444-2921.

## *End Notes*

### *Submit Articles*

If you wish to submit an article to *News and Views* for publication, the following schedule provides dates that articles must be received by in order to be included in the issues listed below:

October Issue 08/18/92

November Issue 09/21/92

December Issue 10/22/92

### *ISD HELP DESK 444-2973*

Have a problem? Need ISD assistance or support for any of your information processing needs--either voice or data? The central contact point is the ISD Help Desk.

880 copies of this public document were printed at a cost of \$264. Distribution costs are \$16.50.  
Editor: Curt Secker

# Training Information

All classes will be held in the Training Room in the basement of the Teachers Retirement Building at 1500 6th Ave. unless another location is specified. There is a limit of 12 participants per paid class and 20 participants per demonstration (free) class, unless otherwise announced. The cost of classes is shown below. Please note that these costs are subject to change each July 1.

To enroll in a class, send an enrollment application to the Department of Administration, ISD Help Desk, Mitchell Building, Helena, MT 59620. If you have questions about enrollment, telephone the Help Desk, 444-2973. *Once you enroll in a class, by mail or telephone, the full fee will be charged UNLESS you cancel at least three business days before the first day of class.*

The classes available and their costs are as follows:

<u>Class Name</u>	<u>Cost</u>	<u>Length in Days</u>
Introduction to TSO/SPF	\$ 80.00	1
Introduction to JCL (Job Control Language)	320.00	4
*Introduction to CICS Programming	**	5
*Introduction to IDMS Database Programming	**	5
*IDMS ADS/Online	**	5
*Introduction to CULPRIT	240.00	3
*Subscribing in CULPRIT	FREE	¼
*CULPRIT Programming for IDMS	160.00	2
*Using COMPAREX	40.00	½
*Introduction to SAS: Module 1	20.00	¼
Module 2	20.00	¼
Module 3	200.00	2½
Module 4	40.00	½
Module 5	40.00	½
*Novell Network Administration	160.00	2
Novell NetWare System Manager	**	3
Novell NetWare Advanced System Manager	**	3
*PC Memory Management Options and Considerations	FREE	¼
*Windows Purchase, Installation and Use Considerations	FREE	¼
*Windows for the Technical Support Team	**	2
Beginning Microcomputer Skills	80.00	1
Fundamentals of DOS	80.00	1
Intermediate DOS	80.00	1
*Introduction to Novell Networks	40.00	½
*Introduction to Windows	80.00	1
Introduction to WordPerfect (5.0 or 5.1)	120.00	1½
Advanced Features of WordPerfect 5.0	120.00	1½
WordPerfect (5.0 or 5.1) Complex Document Functions	40.00	½
More WordPerfect (5.0 or 5.1) Complex Document Functions	40.00	½
WordPerfect 5.1 Tables	40.00	½
WordPerfect 5.1 Columns and Math Functions	40.00	½
WordPerfect 5.1 Graphics	80.00	1
WordPerfect Merge and Sort Functions	40.00	½
WordPerfect 5.1 Macros	80.00	1
WordPerfect 5.1 Tips and Tricks	FREE	¼
*Conversion from WordPerfect 5.0 to 5.1	FREE	¼

*Spreadsheet Design and Documentation	80.00	1
*Conversion from Lotus 1-2-3 Rel. 2.2 to Rel. 3.1	FREE	1/4
Introduction to Lotus 1-2-3, (Release 2.3 or 3.1)	160.00	2
Intermediate Lotus 1-2-3, (Release 2.3 or 3.1)	80.00	1
Lotus 1-2-3 WYSIWYG Features (Release 2.3 or 3.1)	40.00	1/2
Lotus 1-2-3 Graphics (Release 2.3 or 3.1)	40.00	1/2
Lotus 1-2-3, Release 3.1, 3-Dimensional Spreadsheets	40.00	1/2
Lotus 1-2-3 Printing (Release 2.3 or 3.1)	40.00	1/2
*Freelance	80.00	1
*Lotus 1-2-3 Macros (Release 2.2, 2.3, or 3.1)	160.00	2
*Introduction to Lotus 1-2-3 Database Features	160.00	2
*Introduction to PFS:Professional File, Ver. 2.0	80.00	1
Micro Database Concepts and Design	80.00	1
Introduction to R:Base, Release 3.1	200.00	2 1/2
*R:Base Query and Reports (Rel. 3.1)	80.00	1
*R:Base Views (Rel. 3.1)	FREE	1/4
*Intermediate R:Base (Rel. 3.1)	160.00	2
*Introduction to dBASE III+	280.00	3 1/2
State Telephone Training	FREE	1/4

\* This class is not scheduled during the time covered in this issue.

\*\* The cost of this class is not yet determined because it depends on the number of students and the contract amount.



# Training Calendar

## Data Network/Mainframe Classes

August 6	Introduction to TSO/SPF
August 17-19	NetWare System Manager
September 2-4	NetWare Advanced System Manager
September 28-30	NetWare System Manager
October 19	Introduction to TSO/SPF
Oct. 20, 21, 22, 23	Introduction to JCL

## Microcomputer Classes

August 5	Beginning Microcomputer Skills
August 10	Fundamentals of DOS
August 14	Introduction to Windows 3.0 or 3.1
September 1	Beginning Microcomputer Skills

## Word Processing Classes

Aug. 12, Aug. 13 a.m.	Introduction to WordPerfect (5.0 or 5.1)
August 20 a.m.	WordPerfect Merge and Sort Functions
August 26 a.m.	WordPerfect (5.0 or 5.1) Complex Document Functions
August 27 a.m.	More WordPerfect (5.0 or 5.1) Complex Document Functions
August 31 a.m.	WordPerfect 5.1 Columns and Math Functions
Sept 8, Sept 9 a.m.	Introduction to WordPerfect (5.0 or 5.1)
September 17 p.m.	WordPerfect 5.1 Tables
Sept 21, Sept 22 a.m.	Advanced Features of WordPerfect 5.0
September 23 p.m.	WordPerfect 5.1 Tips & Tricks
Oct 5, Oct 6 a.m.	Introduction to WordPerfect (5.0 or 5.1)
October 7 a.m.	WordPerfect 5.1 Columns and Math Functions
October 8 a.m.	WordPerfect Merge and Sort Functions
October 27	WordPerfect 5.1 Macros
October 28 a.m.	WordPerfect Complex Document Functions
October 29 a.m.	More WordPerfect Complex Document Functions

## Spreadsheet Classes

August 11 a.m.	Lotus 1-2-3 Graphics (Release 2.3 or 3.1)
August 24 & 25	Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)
September 10	Intermediate Lotus 1-2-3 (Release 2.3 or 3.1)
September 11 a.m.	Lotus 1-2-3 WYSIWYG Features (Release 2.3 or 3.1)
September 11 p.m.	Lotus 1-2-3 Release 3.1, 3-Dimensional Spreadsheets
September 24 & 25	Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)
October 1 a.m.	Lotus 1-2-3 Graphics (Release 2.3 or 3.1)
October 1 p.m.	Lotus 1-2-3 Printing (Release 2.3 or 3.1)
October 13	Spreadsheet Design and Documentation
Oct 14 & 15	Introduction to Lotus 1-2-3 (Release 2.3 or 3.1)

## Database Classes

September 14  
Sept 15 - 17

Micro Database Concepts and Design  
Introduction to R:Base, Release 3.1

## Communication Classes

## *Data Network/Mainframe Classes*

**INTRODUCTION TO TSO/SPF:** presented by Jane Black Eagle and Denny Knapp of the Application Services Bureau

**DATE:** August 6, 1992  
October 19, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** 3270nd (Interactive Class on Terminal Operation)  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

"Introduction to TSO/SPF" is a hands-on workshop about using computer terminals (or PC terminal emulators) and the SPF editor. SPF is an easy-to-learn, menu-driven system used to enter data and programs into the State's mainframe computer. Entering data, changing data and submitting programs (jobs) for execution are covered in detail. Also covered are SPF's utility functions and the tracking of job output.

This course is essential for state government personnel using terminals or PC's linked to the State's central computer. It is a prerequisite for many other ISD classes.

**INTRODUCTION TO JCL (JOB CONTROL LANGUAGE):** presented by Jane Black Eagle and Denny Knapp of the Application Services Bureau

**DATE:** October 20, 21, 22, 23, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m. each day  
**PREREQUISITE:** Introduction to TSO/SPF  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is designed for programmers, I/O controllers, operations technicians or users of report-writing software who submit jobs on the state's mainframe system.

The course will cover:

- Syntax and coding of IBM Job Control Language (JCL)
- MVS operating system
- Handling datasets and device assignments
- Some of the IBM utilities
- Troubleshooting and interpreting system messages
- Hands-on experience writing and executing JCL

## *Microcomputer Classes*

**BEGINNING MICROCOMPUTER SKILLS:** presented by the staff of The Computer School

**DATES:** August 5, 1992  
September 1, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** None  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course will give participants brief hands-on experience with microcomputers. The following topics will be covered:

- The Machine
- The Operating System
- Word Processing
- Spreadsheets and Graphics
- File Management
- Communications

Most class time will be spent using microcomputers and software. This course helps develop a positive attitude toward using microcomputers and teaches their basic functions. This class--or its equivalent--is a prerequisite for our other microcomputer courses.

**FUNDAMENTALS OF DOS:** presented by the staff of The Computer School

**DATE:** August 10, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

"Fundamentals of DOS" is intended for microcomputer users who need to know more about controlling the microcomputer through its operating system. Programming experience is NOT required. Topics to be covered include:

- What is DOS? Why is it necessary to know about it?
- DOS names for peripherals
- File naming
- Set-up files such as CONFIG.SYS
- Internal DOS commands - DIR, ERASE, RENAME, TYPE, COPY and their variations
- External commands - FORMAT, SYS, DISKCOPY, CHKDSK, MODE
- Interpreting batch files
- Backup procedures

**INTRODUCTION TO WINDOWS:** presented by the staff of The Computer School

**DATE:** August 14, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Beginning Microcomputer Skills or three months of daily microcomputer use  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is a general introduction to Windows. It will cover the basics and show how Windows makes other applications easier to use and more productive. Topics will include:

- What are Windows - multi-tasking and task switching
- Using DOS applications
- Using Windows accessories and features
- Screen, window and menu navigation
- Window sizing and movement
- Customization

This course will not include training for system administrators and programmers. It will not cover Windows installation, maintenance or advanced features such as use for programming and file/directory management.

### *Word Processing Classes*

**INTRODUCTION TO WORDPERFECT:** presented by the staff of The Computer School

**DATE:** August 12 and 13, 1992  
September 8 and 9, 1992  
October 5 and 6, 1992  
**TIME:** 8:30 a.m. to 3:30 p.m. on first day  
8:30 a.m. to noon on second day  
**PREREQUISITE:** Beginning Microcomputer Skills or equivalent  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is a generic introduction to WordPerfect for new users of release 5.0 or 5.1. Experience with WordPerfect is not necessary. Participants will go through the fundamentals of creating, formatting, editing and printing documents. Some advanced features will also be covered, including checking spelling, finding a word or phrase, marking blocks of text, moving text and listing/retrieving document files.

**ADVANCED FEATURES OF WORDPERFECT 5.0:** presented by staff of The Computer School

**DATE:** September 21 and 22, 1992  
**TIME:** 8:30 a.m. to 3:30 p.m. on first day  
8:30 a.m. to noon on second day  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or equivalent  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

For those already using WordPerfect 5.0, the advanced class will cover footnotes, column generation, sorting capabilities, dual document editing, font changes within a document, creation of style sheets and master documents, keyboard layout, the compose function and graphics.

**WORDPERFECT 5.1 TABLES:** presented by staff of the Computer School

**DATE:** September 17, 1992  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover the creation of tables in WordPerfect 5.1. Once students practice with WordPerfect's Tables feature they will be able to create and edit large, complex tables and provide automatically for table entries requiring calculation. Students will learn to create tables with text only or with combinations of text and numbers. Students will use math functions and create formulas to generate table entries and will define and generate column totals and row totals.

**WORDPERFECT 5.1 COLUMNS AND MATH FUNCTIONS:** presented by staff of the Computer School

**DATE:** August 31, 1992  
October 7, 1992  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover the column and math features in WordPerfect 5.1. Students will learn to set up and edit newspaper and parallel columns of various widths and lengths. They will practice editing text or figures in columns without losing the desired layout or visual effect. For column entries requiring calculation, subtotals and totals, students will learn to create and use column definitions, math functions, and formulas.

**WORDPERFECT MERGE AND SORT FUNCTIONS:** presented by staff of the Computer School

**DATE:** August 20, 1992  
October 8, 1992  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover the file merge and sort features of WordPerfect. Students currently using WordPerfect 5.0 or 5.1 will have hands-on practice with the steps needed to generate files sorted in a variety of ways. They will also learn to merge primary and secondary files for mass mailings, for example, and to set up files for keyboard merges.

**WORDPERFECT COMPLEX DOCUMENT FUNCTIONS:**

presented by staff of the Computer School

**DATE:**

August 26, 1992

October 28, 1992

**TIME:**

8:30 a.m. to noon

**PREREQUISITE:**

Introduction to WordPerfect 5.0 or 5.1

**LOCATION:**

Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will cover Master and Subdocument design as well as creation of tables of contents. Using WordPerfect's Master Document feature allows creation of larger or more complex documents while providing more manageable and editable documents. Examples are reports containing multiple chapters or requiring tables of contents, lists of figures and tables, outlines, headers and/or footers. Students currently using WordPerfect 5.0 or 5.1 will learn WordPerfect features that make it easy to generate tables of contents, lists and outlines and to combine subdocuments into a complex master document. Students will learn how to build, edit and expand a master document that includes lists of the document's contents.

**MORE WORDPERFECT COMPLEX DOCUMENT FUNCTIONS--FONTS, STYLES AND LISTS:**

presented by staff of the Computer School

**DATE:**

August 27, 1992

October 29, 1992

**TIME:**

8:30 a.m. to noon

**PREREQUISITE:**

WordPerfect (5.0 or 5.1) Complex Document Functions

**LOCATION:**

Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will expand upon the concepts covered in the prerequisite class. Persons currently using WordPerfect 5.0 or 5.1 will learn WordPerfect features that they can use to create a variety of reports and other complex documents. Students will learn to incorporate lists of tables and figures, headers and footers, footnotes or endnotes, and cross-referencing into the Master and Subdocument design. The class will also cover the use of Style, Font, Text In/Out, Graphics and Compose functions for document design and layout. This class will be taught using WordPerfect 5.1, but concepts and functions covered are available in WordPerfect 5.0.

**WORDPERFECT 5.1 TIPS AND TRICKS:**

presented by Kyle Wynn of Application Services Bureau

**DATE:**

September 23, 1992

**TIME:**

1:30 p.m. to 3:30 p.m.

**PREREQUISITE:**

Introduction to WordPerfect (5.0 or 5.1); Advanced Features of WordPerfect (5.0 or 5.1) is recommended

**LOCATION:**

Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This free session demonstrates tips and a variety of tricks for using such features as edit, block, tables, columns, tabs, keyboard, merge and sort, graphics, and print. The focus is on some of the more complex desktop publishing capabilities of WordPerfect. The more familiar you are with the basic and some advanced features, the more you will gain from this demonstration. In addition to hands-on practice, there will be a hand-out with detailed instructions for each of the features and tips presented.

## WORDPERFECT 5.1 MACROS

presented by staff of the Computer  
School

**DATE:** October 27, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Introduction to WordPerfect 5.0 or 5.1  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This is a seminar class that will cover the theory and construction of basic WordPerfect macros. Class will begin with simple hot key and named macros and proceed through the introductory level of the macro language. Special macros will be created such as capturing inside addresses for printing envelopes and building simple menus for lists of commonly used tasks. Students are encouraged to bring examples of tasks for instructor assisted class projects.

## *Spreadsheet Classes*

**SPREADSHEET DESIGN AND DOCUMENTATION:** presented by Irvin Vavruska of the  
Application Services Bureau

**DATE:** October 13, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will emphasize the importance, effectiveness and the organizational benefits of good spreadsheet design and documentation. Lotus 1-2-3 Release 2.2 will be used to demonstrate good and bad techniques. Some common methods for solving logic problems and locating design and programming mistakes will be covered.

**INTRODUCTION TO LOTUS 1-2-3, RELEASE 2.3 OR 3.1:** presented by the staff of The  
Computer School

**DATE:** August 24 and 25, 1992  
September 24 and 25, 1992  
October 14 and 15, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m. each day  
**PREREQUISITE:** Beginning Microcomputer Skills  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is a generic introduction to Lotus 1-2-3 for persons with little or no Lotus experience. It will consist of instructions and hands-on practice, with lab time available for building spreadsheets of the participants' choosing.

The class will cover design, creation, printing and editing of spreadsheets. Additional topics will include selected graphic features, the use of formulae to connect spreadsheets, and the opening of multiple files at the same time. Students will learn about new WYSIWYG (What You See Is What You Get) features of Releases 2.3 and 3.1 such as enhanced printing of spreadsheets and graphs.



**LOTUS 1-2-3 WYSIWYG FEATURES:** presented by the staff of The Computer School

**DATES:** September 11, 1992  
**TIME:** 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1 or 3.1+ who are already using Lotus 1-2-3 to create spreadsheets. It introduces students to the WYSIWYG (What You See Is What You Get) features of Lotus 1-2-3. The class consists of lecture and hands-on practice with the following features:

- Format--fonts, boldface, italics, underline, shadow, and outline
- Text--ranges, alignment, edit
- Screen display, zoom and customization
- Graphics within a worksheet--adding, enhancing, changing size or location
- Page layout
- Previewing and printing
- Advanced WYSIWYG features

**LOTUS 1-2-3 GRAPHICS:** presented by the staff of The Computer School

**DATES & TIMES:** August 11, 1992, 8:30 a.m. to noon  
October 1, 1992 8:30 a.m. to noon  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1 or 3.1+ who are already using Lotus 1-2-3 to create spreadsheets. After a review of the basic Graph features, students will explore options such as automatic graph creation, group data ranges, graph windows, graph areas and Named versus Saved graphs. The class will then cover graphic display and print options. Students will learn to select colors, patterns, fonts and graph types and to save graphs and incorporate graphics into their spreadsheets.

**LOTUS 1-2-3 PRINTING, RELEASE 2.3 OR 3.1 OR 3.1+:** presented by the staff of The Computer School

**DATE:** October 1, 1992  
**TIME:** 1:00 p.m. to 4:30 p.m.  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1, or 3.1+ who are already using Lotus 1-2-3 to create spreadsheets and who want to have more control over printing. After a review of basic printing features, students will explore the Print Options menu, embedded printer control codes, printer setup strings, and creating .PRN files. The class will also cover using menu commands to print compressed, standard, or expanded characters; print compressed or standard pitch (line spacing); and print fonts and colors available on your printer. Other topics covered include automatic and manual page compression, print preview, and an introduction to WYSIWYG as it pertains to controlling page layout.

**INTERMEDIATE LOTUS 1-2-3, RELEASE 2.3 OR 3.1:** presented by the staff of The Computer School

**DATE:** September 10, 1992  
**TIME:** 8:30 a.m. to 4:30 p.m.  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 2.3, 3.1 or 3.1+. It covers intermediate features of Lotus 1-2-3 for those who are familiar with Lotus basics. It consists of instructions and hands-on practice, with lab time available for building spreadsheets of the students' choosing.

The following topics will be presented:

- @ functions
- Date and time formats and functions
- Ranges--naming, hiding and protecting ranges; using range commands
- Global defaults
- Titles, windows and text editing

Time permitting, the following topics will be covered with some hands-on practice:

- Selected file functions and file linking
- Magellan Viewer Addin (available in Releases 2.3 and 3.1+ only)
- Auditor Addin (available in Releases 2.3 and 3.1+ only)

**LOTUS 1-2-3, RELEASE 3.1, 3-DIMENSIONAL SPREADSHEETS:** presented by the staff of The Computer School

**DATES & TIMES:** September 11, 1992, 1:00 p.m. to 4:30  
**PREREQUISITE:** Introduction to Lotus 1-2-3  
**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This course is intended for users of Release 3.1 who are using Lotus 1-2-3 to create spreadsheets. It covers the purposes of three dimensional spreadsheets and provides hands-on practice with multiple (3-dimensional) worksheets within a file. Features covered include:

- Multiple worksheet uses
- Inserting and deleting worksheets
- Navigation among worksheets
- Working with three-dimensional ranges
- Perspective view
- Using group mode
- Working with more than one file in memory
- Navigating among files

## *Database Classes*

### **MICRO DATABASE CONCEPTS AND DESIGN:**

presented by Denny Knapp of the Application Services Bureau

**DATE:** September 14, 1992

**TIME:** 8:30 a.m. to 4:30 p.m.

**PREREQUISITE:** Beginning Microcomputer Skills

**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class is designed to give participants a preliminary understanding of what a relational database is and how it compares to other products like Lotus 1-2-3 and PFS:Professional File. The class teaches database design techniques and is a prerequisite for other database classes offered by ISD.

### **INTRODUCTION TO R:BASE, RELEASE 3.1:** presented by the staff of The Computer School

**DATE:** September 15 through September 17, 1992

**TIME:** 8:30 a.m. to 4:30 p.m. on first and second days

8:30 a.m. to noon on third day

**PREREQUISITE:** Beginning Microcomputer Skills, Micro Database Concepts and Design and Fundamentals of DOS

**LOCATION:** Basement of the Teachers Retirement Bldg. at 1500 6th Ave.

This class will give participants hands-on experience creating a database and developing a simple application with R:Base 3.1. The application will include database updates, queries, and simple form and report generation. The R:Base menu system will be used to develop the application. This class will not cover the R:Base command mode or programming other than menu system application development.

**ISD CLASS ENROLLMENT APPLICATION**  
**COMPLETE THIS APPLICATION IN FULL AND**  
**RETURN IT TO THE INFORMATION SERVICES "HELP DESK"**  
**PRIOR TO THE FIRST DAY OF CLASS**

**COURSE DATA**

Course Requested: \_\_\_\_\_

Date Offered: \_\_\_\_\_

**STUDENT DATA**

Name: \_\_\_\_\_

Soc. Sec. Number (for P/P/P): \_\_\_\_\_

Agency & Division: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: \_\_\_\_\_

How have you met the required prerequisites for this course? Explain, giving the class(es) taken, tutorial(s) completed, and/or experience.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**BILLING INFORMATION/AUTHORIZATION**

ISD Billing Number (5 digits): \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

FULL CLASS FEE WILL BE BILLED TO THE REGISTRANT UNLESS  
CANCELLATION IS MADE THREE BUSINESS DAYS BEFORE  
THE START DATE OF THE CLASS.

**SEND COMPLETED FORM TO:**  
**ISD HELP DESK, DEPARTMENT OF ADMINISTRATION**



DEPARTMENT OF ADMINISTRATION  
INFORMATION SERVICES DIVISION  
ROOM 25 MITCHELL BLDG  
HELENA MT 59620

HAROLD CHAMBERS  
MONTANA STATE LIBRARY  
REFERENCE & INFO SERVICES  
1515 E SIXTH  
HELENA MT 59620

DEADHEAD